Message

From: Praskins, Wayne [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=4F47BC0A2C2E42A98347D59CD1A98B19-WPRASKIN]
Sent: 3/3/2020 1:26:50 AM
To: Rankins, Jonathan E CIV USARMY CEMVS (USA) [Jonathan.E.Rankins@usace.army.mil]; Clements, Julie A CIV (USA) [Julie.A.Clements@usace.army.mil]; Hays, David C Jr CIV USARMY CENWK (USA) [David.C.Hays@usace.army.mil]; Walker, Stuart [Walker.Stuart@epa.gov]
Subject: RE: RESRADBLD runs, 4 walls (2m up from floor) and floor (approx. 10m2)
Attachments: Copy of HPNS Bldgs_Res Risk_1%_10%_20% RFs_WP.xlsx

Jon -

I was curious how much the risks increased by adding the lower walls to the RESRAD risk estimates. I added a column summing the parent and progeny values from your resident risk estimates (column AD), another column with the RESRAD BUILD risk values from the Navy report (child + adult, column AE), and calculated the ratio of your risk values to the Navy's values (column AF). I see that the risks generally increased by a factor of 3 to 4. Does that look right?

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-----Original Message-----
From: Rankins, Jonathan E CIV USARMY CEMVS (USA) <Jonathan.E.Rankins@usace.army.mil>
Sent: Monday, March 2, 2020 10:53 AM
To: Clements, Julie A CIV (USA) <Julie.A.Clements@usace.army.mil>; Hays, David C Jr CIV USARMY CENWK (USA) <David.C.Hays@usace.army.mil>; Walker, Stuart <Walker.Stuart@epa.gov>; Praskins, Wayne <Praskins.Wayne@epa.gov>
Subject: RESRADBLD runs, 4 walls (2m up from floor) and floor (approx. 10m2)

The risk results are a bit surprising. Total residential risks (child + adult) increase very slightly (actually, negligibly) from 1% to 20% removable fractions (RF)...

RF = 1%: 3.94E-04

RF = 10%: 3.96E-04

RF= 20%: 3.97E-04

The detailed risk results are attached (including decay chain risks, since it was easier to summarize that way). Formulas are included.

There is definitely an upward trending of dose with increasing removable fraction. Below are the total residential doses (child + adult). As I did with the risk models, results from the child models are presented for year 0, while results from the adult models are presented for year 7.

RF = 1%: 52.8 mrem/yr

RF = 10%: 62.7 mrem/yr

RF= 20%: 73.8 mrem/yr